(54) Title: CELL SEARCH PROCESS FOR WIRELESS COMMUNICATION SYSTEM
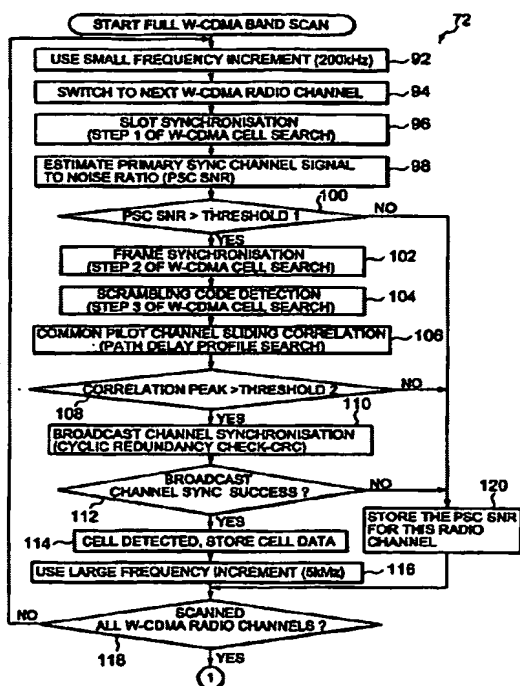
(57) Abstract: A method of cell search in a wireless com-
munication systems having a plurality of base stations and a
mobile station, each of the plurality of base stations serving a
separate cell within a service area and transmitting a common
primary synchronisation code (PSC) in a primary synchro-
nisation channel within a slot of a radio frame, the method
including the steps of: (a) scanning (72) through radio chan-
nels in scanning increments corresponding to a standard chan-
nel raster; (b) estimating (98) the PSC signal-to-noise ratio of
each radio channel; (c) if a PSC signal-to-noise ratio is above
a first predetermined threshold level (100), completing a cell
search procedure including slot synchronisation, frame syn-
chronisation and scrambling code detection steps for that ra-
dio channel; (d) if the cell search procedure is successfully
completed (112) for the radio channel in step (c), increasing
the scanning increments to the broadcast frequency separation
between cells; (e) when all radio channels are scanned in step
(d), sorting (74) the scanned radio channels in descending or-
der by PSC signal-to-noise ratio; and (f) performing (76) the
cell search procedure on each sorted radio channel in descend-
ing order.